REMARKS

Claims 1-3 remain pending in this application. Claims 1-3 are rejected. Claims 1-3 are amended herein to clarify the invention. For the convenience of the Examiner, APPENDIX I is provided herewith having a complete set of pending claims with all amendments effected therein.

PARAGRAPH FOR SUBSTITUTE SPECIFICATION AND ABSTRACT

Applicant submits herewith a substitute specification and abstract wherein amendments are effected to place the text thereof into proper English in accordance with 37 CFR 1.125(c). Also accompanying this amendment is a reproduction of the original specification and abstract with markings indicating the amendments effected in the substitute specification in accordance with MPEP §608.01(q) and 37 CFR 1.125(b). No new matter is added. Entry of the substitute specification and abstract is respectfully requested.

CLAIM REJECTIONS UNDER 35 U.S.C. § 112, SECOND PARAGRAPH

Claims 1-3 are rejected as indefinite under 35 U.S.C. § 112, second paragraph, for failing to particularly point out and distinctly claim the subject matter of the invention as a result of informalities stated in the Office Action.

The claims are amended to remove the various wordings noted in the Office Action. For example, "elongate" is now replaced with "extended." Also, the bends are now claimed as each "having a center of curvature."

With regard to the phraseology, "previously bent," this is now removed. However, the Examiner states that the claims appear to claim an "intermediate structure." While the claims are amended to more clearly state the invention, applicant will note that what is being claimed is the one-way clutch, including the clutch spring described in the claim. The structure of the one-way clutch is determined in part by the state of the clutch spring prior to assembly into the one -way clutch since the configuration of the clutch spring before assembly determines how much deflection of the clutch spring is caused by contact with the engagement members. Thus claim 1 first states:

> said clutch spring being formed such that after formation and prior to introduction of said engagement members into said pocket openings, said tongues extend inclined relative to said base portions so as to define a formed angle in the range of 20° to 30° relative to the base portions when no pressure is applied to the tongues[.]

This recitation is the followed by the following portion indicating the installed sate of the clutch spring:

> said engagement members being disposed in said pocket openings so as to apply pressure to said tongues to deflect said tongues beyond said formed angle thereby producing a bias on said engagement members to move said engagement member toward engagement with said inner ring and outer ring.

Thus, it should be evident that claim 1 is not directed to an "intermediate structure," but rather a final assembly of the one-way clutch which is, in part, defined by a non-deflected state of the clutch spring. This is because the force applied to the engagement members in the final structure is reduced due to the pre-deflected configuration of the tongue prior to assembly.

In a similar manner claim 3 defines the one-way clutch by reference to the state that the tongues of the clutch spring are formed in. In particular, it is stated that:

> said tongues being so formed in said plate spring member such that prior to disposal in said annular space and said contact with said engagement members, and when in a state absent application of pressure and resultant deflection, a first distance from the tip end portion to said first plate spring side of said annular base portions is larger than a second distance between an apex of said second bend to said plate spring side of said annular base portions, and radii of curvature of said first, second and third bends are in a range of 0.2 to 0.6 mm.

The claim additionally prefaces the above description of the tongues by stating "said plate spring member having tongues formed therein which extend into said pocket openings from said column portions and which are deflected by contact with

said engagement members so as to bias said engagement members." Hence, the tongues are deflected from the state in which they are initially formed, and this initial state in turn serves to define the bias applied to the engagement members. Therefore, since the bias is part of the final structure, the claims are merely defining the bias feature in terms of the formation of the clutch spring.

In view of the above, reconsideration of the rejection of claims 1-3 and their allowance are earnestly requested.

CLAIM REJECTIONS UNDER 35 U.S.C. §103(a)

Claims 1-3 are rejected as obvious over the Message reference in view of Japanese document 2-76234 ('234) and the Miura reference under 35 U.S.C. §103(a). The applicant herein respectfully traverses this rejection. For a rejection under 35 U.S.C. §103(a) to be sustained, the differences between the features of the combined references and the present invention must be obvious to one skilled in the art.

It is respectfully submitted that the Miura '114 reference is not applicable prior art under 35 U.S.C. §103. The Miura '114 reference is published exactly one year before the PCT filing date of the present invention. Hence, it is not art under §102(b) and only qualifies as art under §102(e). The Miura '114 reference is

assigned to the same assignee as the present invention and hence is excluded from rejections under §103(a) by the provisions of §103(c).

The Examiner contends that the Message reference teaches tongues at approximately the angle of 20° to 30°. However, it appears that because of the prior claim wording the Examiner is not taking into account that the angle range of 20° to 30° is when the tongues are formed, prior to engagement with the engagement members, " when no pressure is applied to the tongues." This deflection of the tongues prior to engagement with the engagement members reduces the drag torque of the one-way clutch and is in no way taught, suggested or even hinted at by the Message reference.

The primary Message '093 reference fails to teach such a configuration. It does not teach that the tongue is at an inclined angle absent deflection by the engagement member. The message reference requires deflection by application of the engagement member to effect deflection through the full angle c. This is evident because the reference states that the force applied by the tongue is proportional to the angle c shown in Fig. 1. col. 4, lines 28-38. It is only necessary to have a rudimentary understanding mechanics and spring dynamics to realize this is only possible when the state of the tongue when exerting no force is at an angle of 0 degrees.

The Miura '114 reference, even if applicable, does not teach that the tongues a deflected to the range of 20° to 30° is when the tongues are formed, prior to engagement with the engagement members. Instead, Miura '114 clearly shows in Fig. 7 that the ends of the tongues are preformed to be substantially on the same plane as the base portions of the spring plate. Thus the tongues are deflected by the engagement member from about a 0° position. This results in greater drag force than the present invention and cannot lead one to an understanding of the present invention which would render it obvious. In a similar manner, the JP '234 reference requires reflection of the tongue by the engagement member from a 0° position "a" in Fig.4 and does suggest the present invention

In the present invention, due to the initial non-tensioned state of the tongue being at an angle α as shown in Fig. 2c , the force is not proportional to the total angle of deflection β, but is only proportional to the added angle of deflection shown by γ. Therefore, drag force is reduced. Hence, claim 1 requires an angle range of 20° to 30° exist when the tongues are formed, prior to engagement with the engagement members. As such, neither of the Message reference, the JP '234 reference or event the Miura '114 reference would lead to the claimed invention.

Claim 2 is submitted as patentable for teaching a further deflection in the range of "range of 5° to 15° beyond said formed angle." Since none of the references teach or render obvious the idea to have the formed angle of "20° to

30°" that exists absent deflection by said engagement members, the further deflection of the tongues of "5° to 15° beyond said formed angle" is likewise not obvious.

Furthermore with regard to the claimed angular ranges, the Examiner's attention is directed to the test results stated in the specification on page 12. As is evident, the claimed ranges yielded the lowest idling torque of 0.4 to 0.6 while simultaneously demonstrating no problem regarding the locking property and enablement of employment. Hence, the claimed range yields unexpected results in permitting low drag torque to be obtained without operational problems.

Claim 3 includes the distinguishing feature that "when in a state absent application of pressure and resultant deflection, a first distance from the tip end portion to said first plate spring side of said annular base portions is larger than a second distance between a most distal point of said second bend to said plate spring side of said annular base portions." This is not shown in the '234 reference, the Miura '114, or the Message reference.

Fig. 4 of the '234 reference shows that the tongue is deflected down from a non-deflected "a" to a deflected state "b" by the engagement member 14. In the non-deflected state the tip end is not further displaced from a spring side than the bottom of the bend 5. Hence, the present claim language cannot be read on the '234 reference. Additionally, as noted above with respect to both of the Miura '114

and the Message references, the tongues are not formed deflected to a position where the tip end portions of the tongues extend a greater distance from the plate spring side than the bend portions because the deflection of the tongues by the engagement members begins from a position of essentially 0°.

Thus, it is respectfully submitted that the rejected claims are not obvious in view of the cited references for the reasons stated above. Reconsideration of the rejections of claims 1-3 and their allowance are respectfully requested.

REQUEST FOR EXTENSION OF TIME

Applicant respectfully requests two month extension of time for responding to the Office Action. Please charge the fee of $460.00 for the extension of time to Deposit Account No. 10-1250.

If there is any discrepancy between the fee(s) due and the fee payment authorized in the Credit Card Payment Form PTO-2038 or the Form PTO-2038 is missing or fee payment via the Form PTO-2038 cannot be processed, the USPTO is hereby authorized to charge any fee(s) or fee(s) deficiency or credit any excess payment to Deposit Account No. 10-1250.

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In light of the foregoing, the application is now believed to be in proper form for allowance of all claims and notice to that effect is earnestly solicited.

Respectfully submitted,
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